

MONTANA DEPARTMENT OF  
FISH, WILDLIFE, & PARKS



FRENCH CREEK  
FISH BARRIER  
MOUNT HAGGIN WILDLIFE  
MANAGEMENT AREA

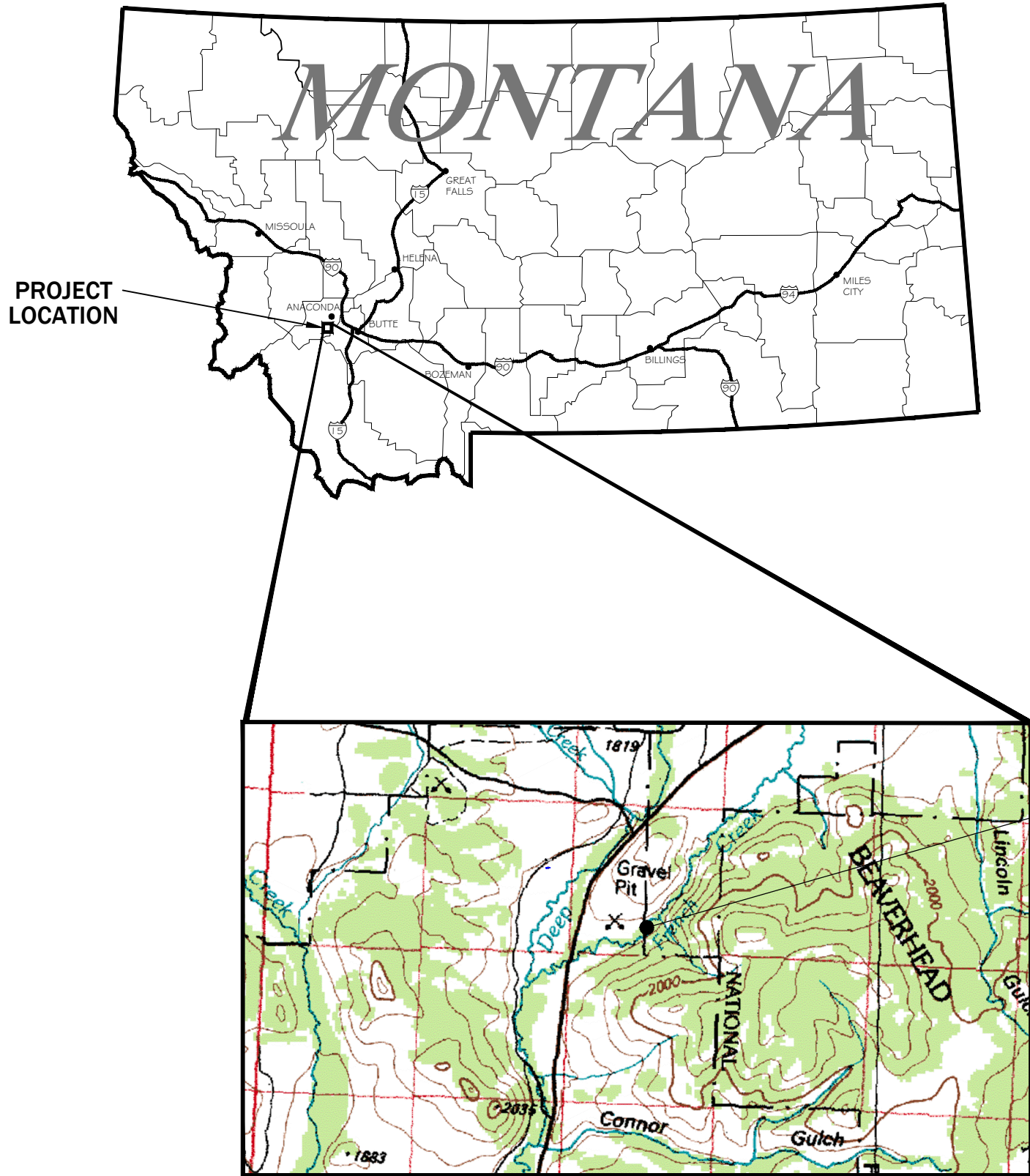


PREPARED BY

PIONEER TECHNICAL SERVICES, INC.  
DATE: 6/21/13

SHEET INDEX

SHEET NO.	DESCRIPTION
1	COVER SHEET AND INDEX
2	SITE PLAN
3	FISH BARRIER STRUCTURE PLAN
4	FISH BARRIER CROSS SECTION AND PROFILE
5	BACKFILL PLAN
6	STRUCTURAL DETAILS
7	BACKFILL TYPICAL SECTIONS AND DETAILS

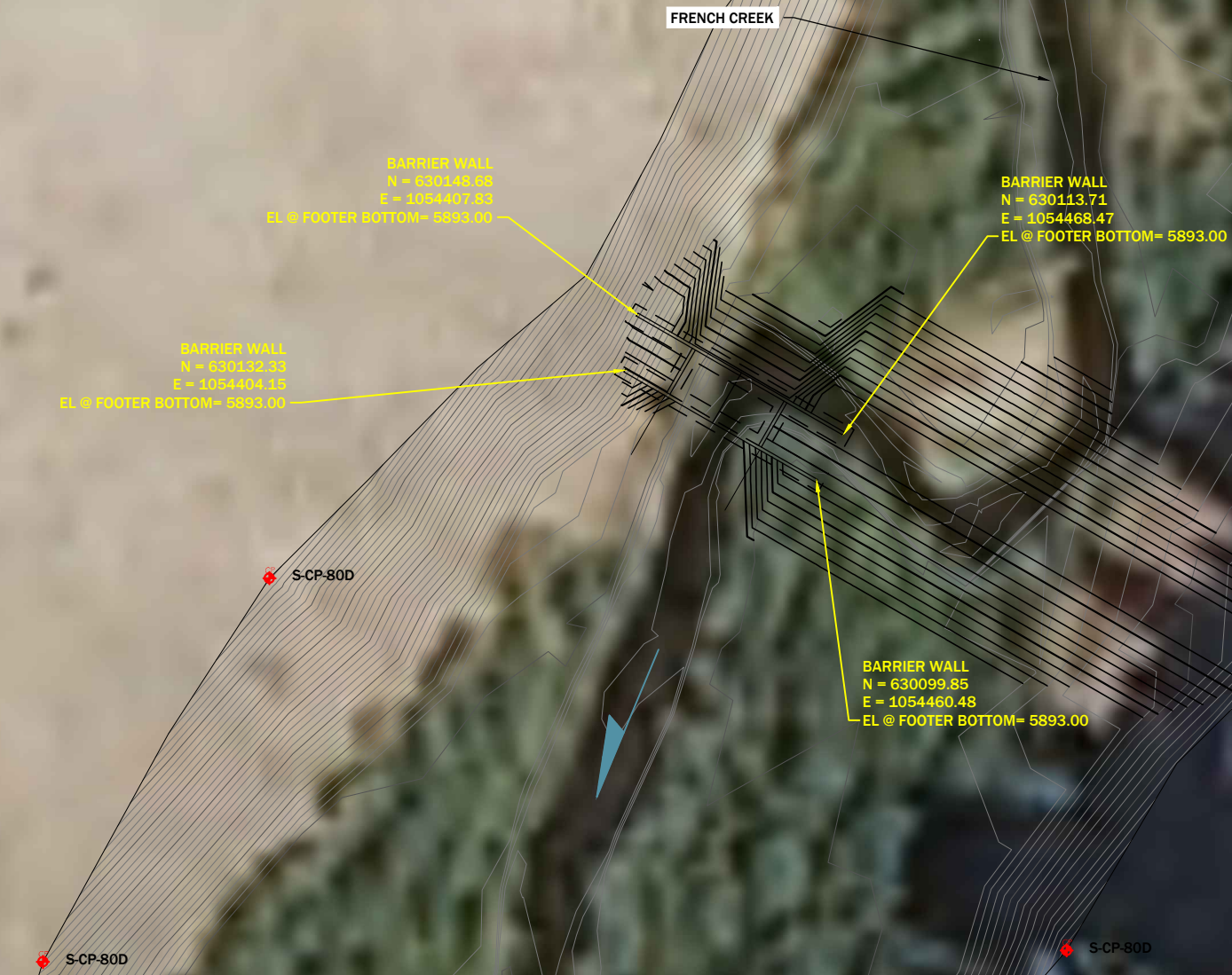


SITE VICINITY MAP  
SOURCE: USGS

PRELIMINARY  
NOT FOR CONSTRUCTION



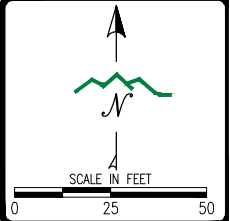
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S-CP-80D	629415.99	1053722.71	5892.76
S-CP-80D	629962.09	1054533.83	5915.64
S-CP-80D	629958.69	1054233.53	5918.15
S-CP-80D	630071.29	1054299.98	5932.2



REVISION:	DATE:	BY:	DESC:

DRAWN BY:	JJJ
DESIGNED BY:	JDE
CHECKED BY:	JDE
APPROVED BY:	GEA
PROJECT NO:	
DATE:	06/22/13

DISPLAYED AS:	
COORD SYS/ZONE:	MSP
DATUM:	NAD 83
UNITS:	INT. FEET
SOURCE:	PIONEER

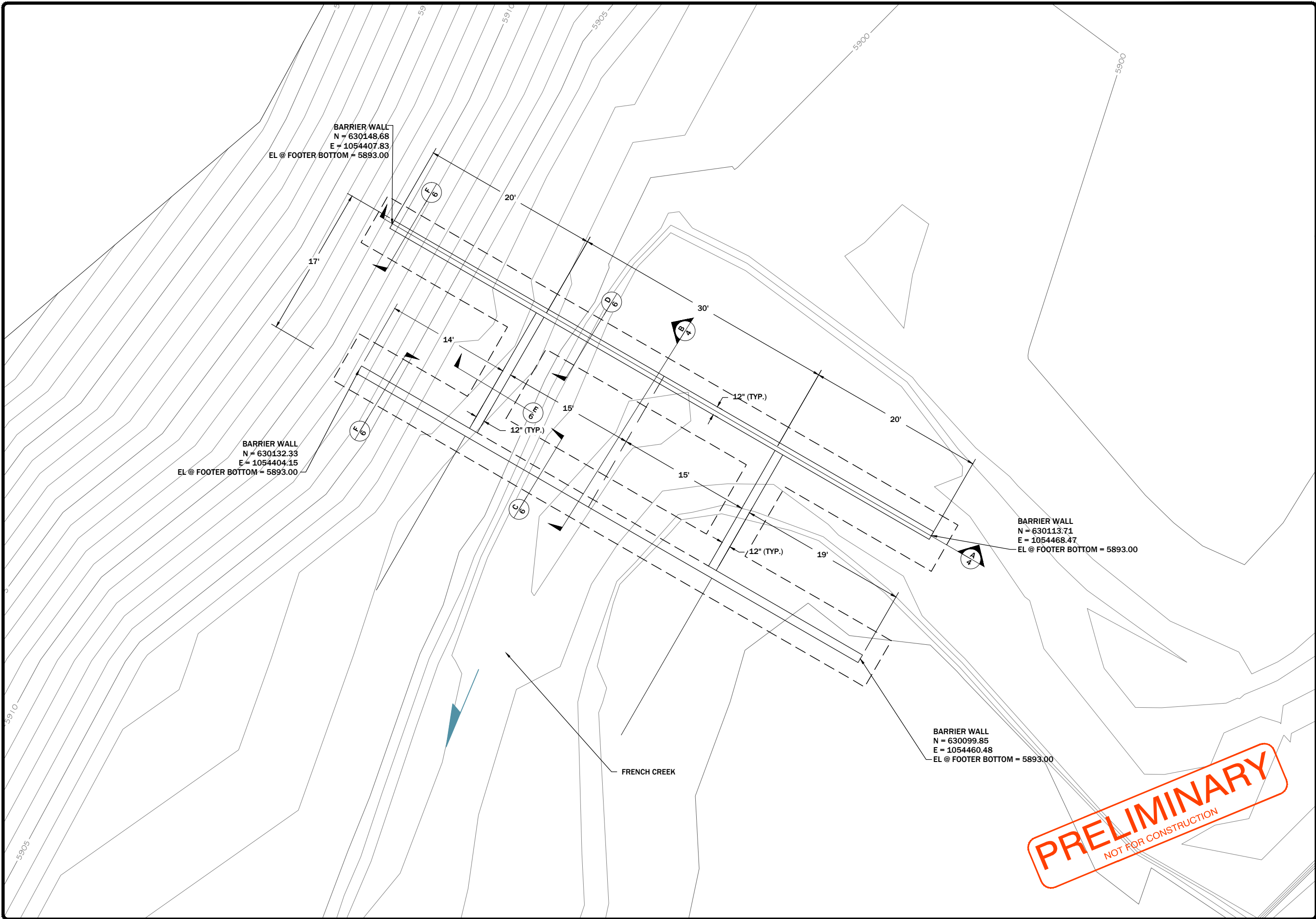


MTFWP  
FRENCH CREEK  
FISH BARRIER

FRENCH CREEK  
FISH BARRIER  
SITE PLAN

 **PIONEER**  
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40 SPANISH PEAKS DR. SUITE 101  
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(406) 388-8578

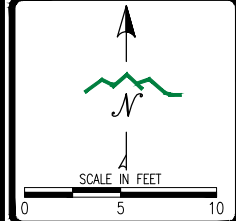
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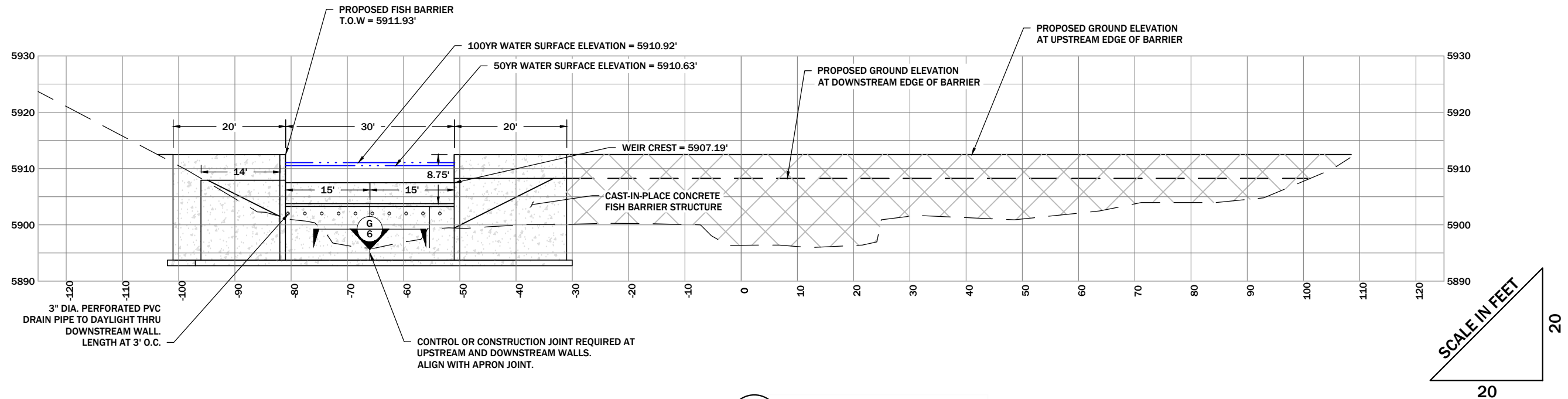
MTFWP  
FRENCH CREEK  
FISH BARRIER

FRENCH CREEK  
FISH BARRIER  
STRUCTURE PLAN

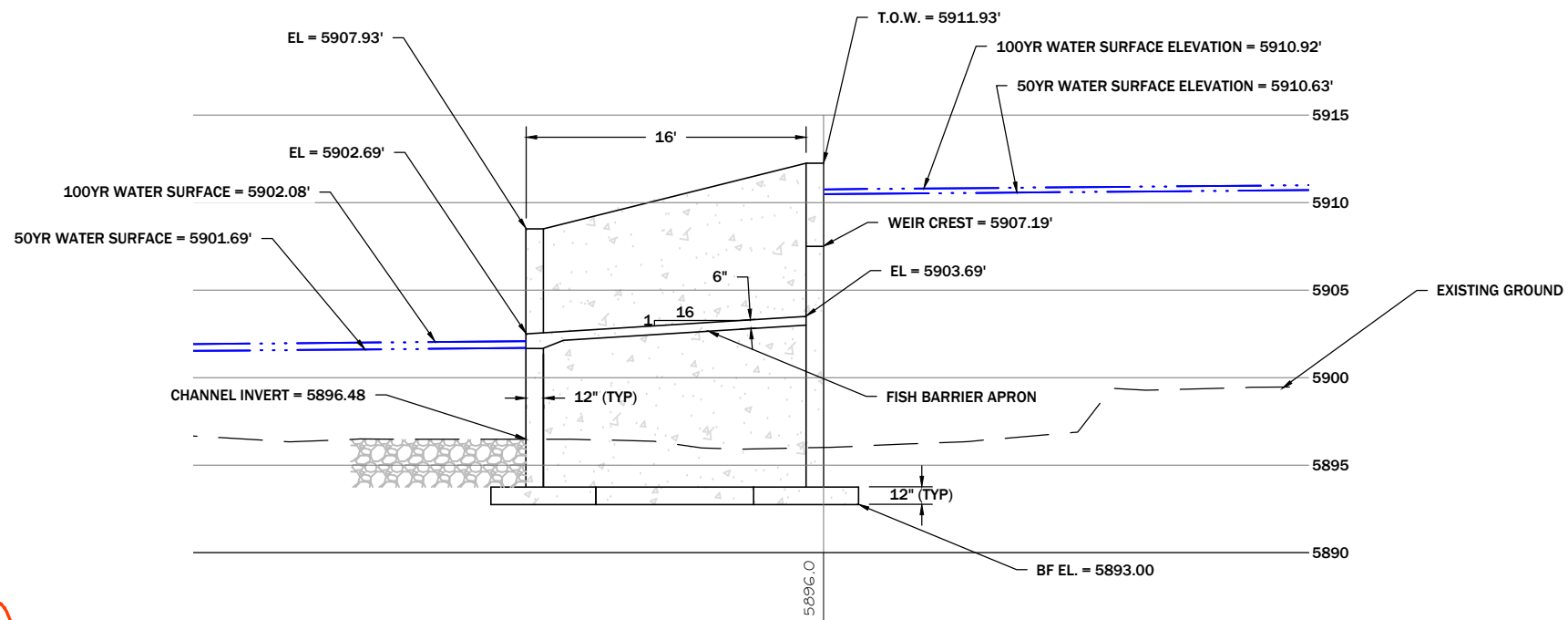


SHEET  
3





**A**  
**3** FISH BARRIER SECTION  
SCALE: 1" = 20'



**B**  
**3** FISH BARRIER PROFILE  
SCALE: 1" = 10'

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DATUM: NA  
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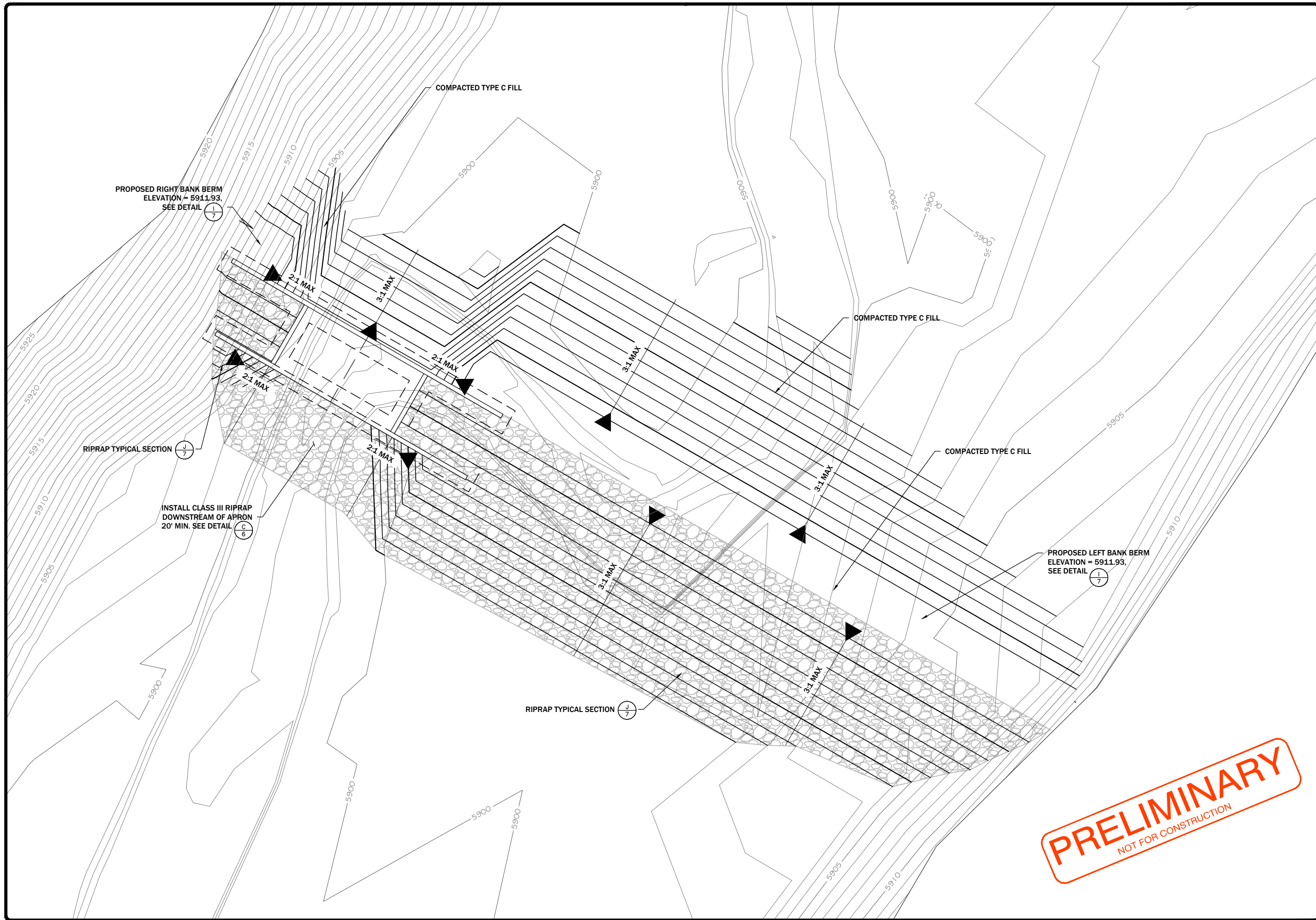
SCALE IN FEET  
0 5 10

MTFWP  
FRENCH CREEK  
FISH BARRIER

FRENCH CREEK  
FISH BARRIER  
CROSS SECTION  
AND PROFILE

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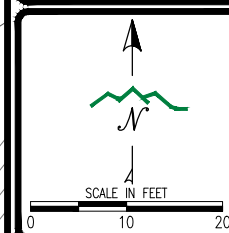
SHEET  
4



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DATUM: NAD 83  
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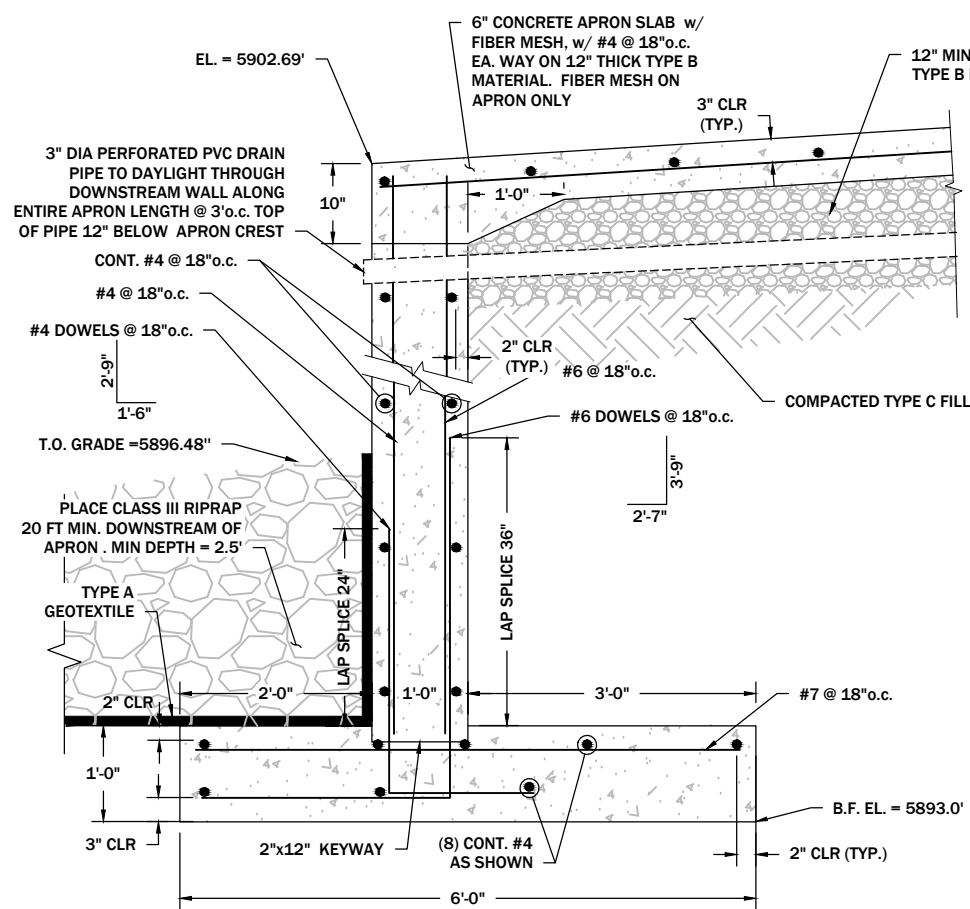


MTFWP  
FRENCH CREEK  
FISH BARRIER

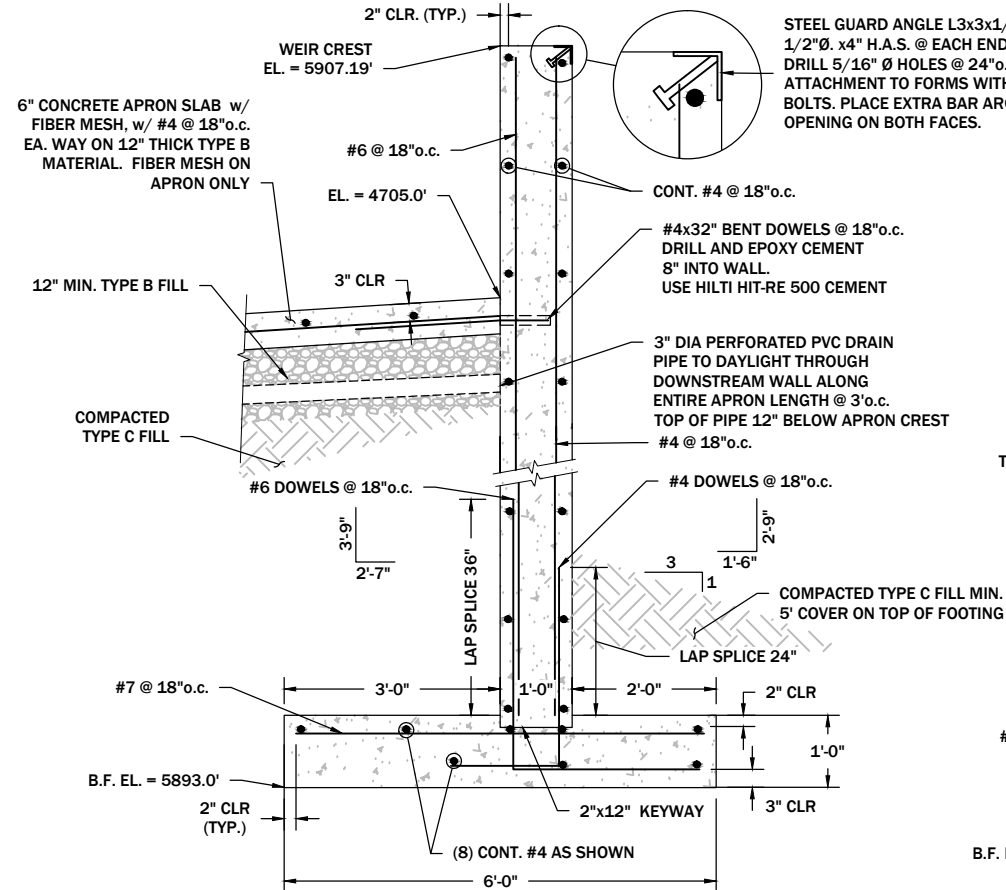
FRENCH CREEK  
FISH BARRIER  
BACKFILL PLAN



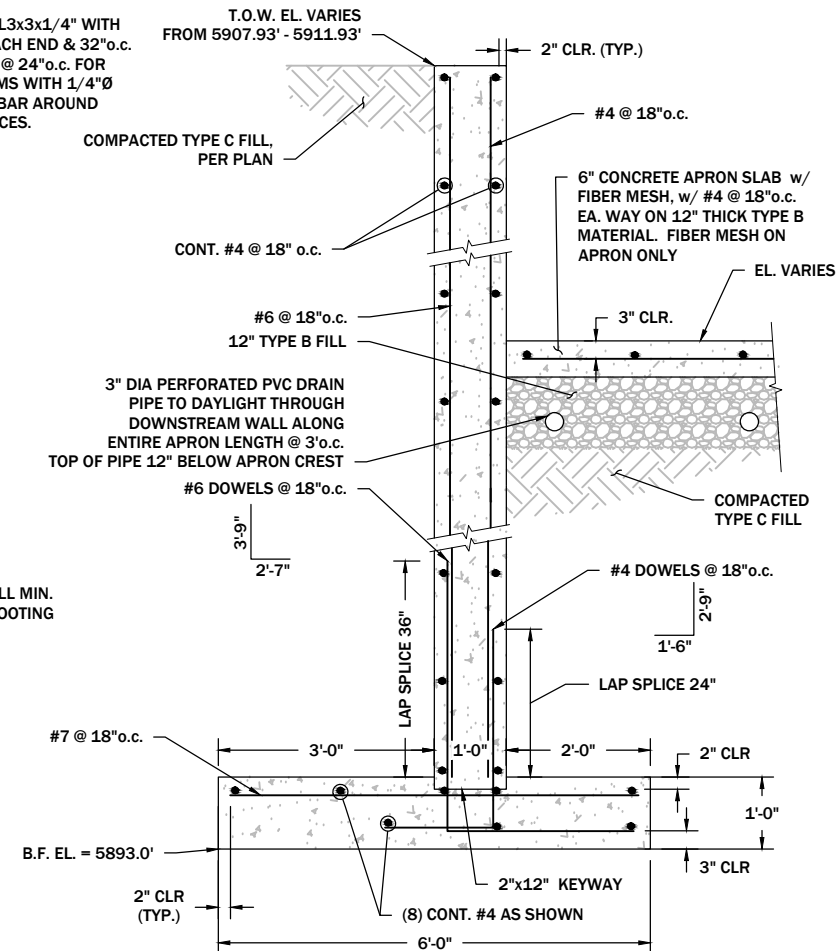
SHEET  
5



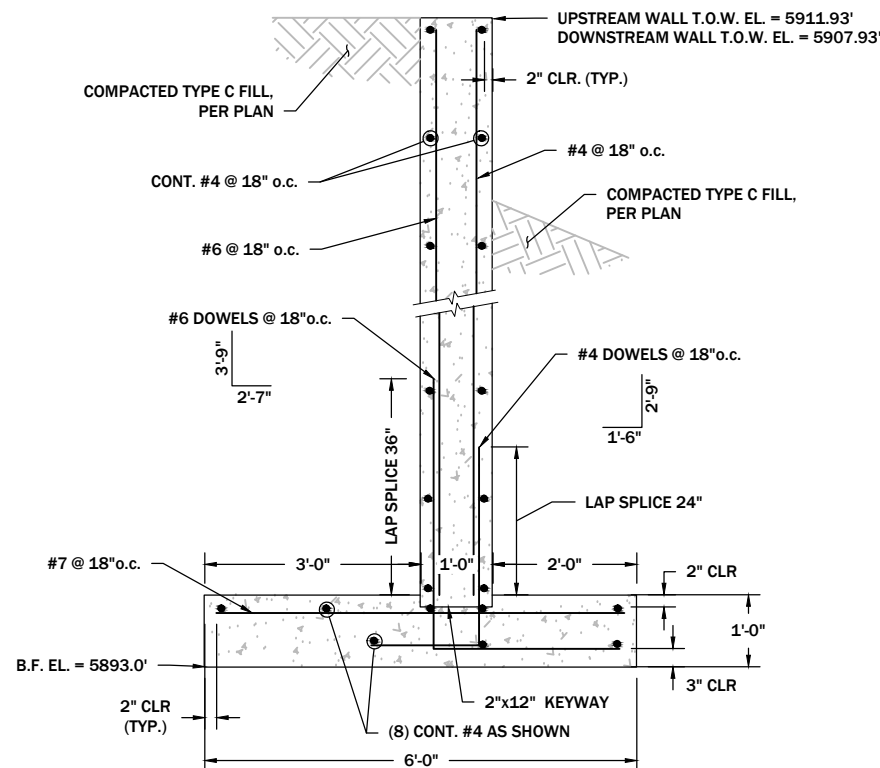
**C** DOWNSTREAM WALL TYPICAL SECTION  
3,5 SCALE: 1/2" = 1'-0"



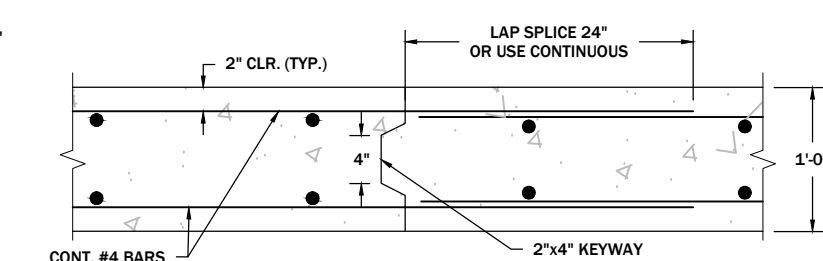
**D** UPSTREAM WALL TYPICAL SECTION  
3 SCALE: 3/8" = 1'-0"



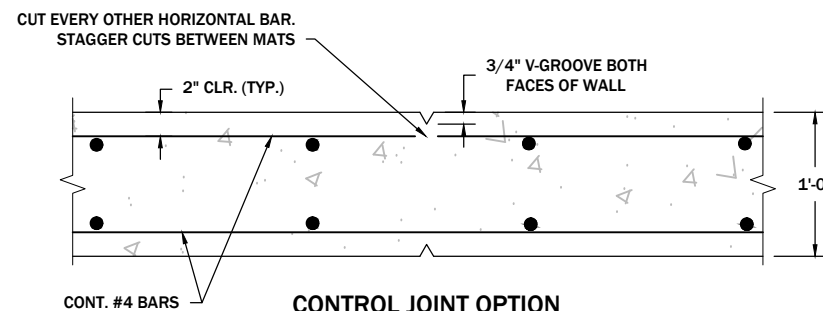
**E** END WALL TYPICAL SECTION  
3 SCALE: 3/8" = 1'-0"



**F** WINGWALL TYPICAL SECTION  
3 SCALE: 3/8" = 1'-0"



CONSTRUCTION JOINT OPTION



CONTROL JOINT OPTION

NOTE:  
1. EITHER OPTION CAN BE USED AT WALL JOINTS.

**G** REQUIRED WALL CONTROL JOINTS  
4 SCALE: 3/4" = 1'-0"

#### GENERAL NOTES:

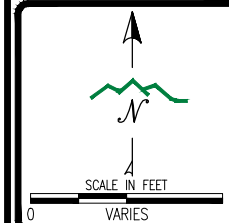
1. PROVIDE CORNER BARS WITH 24" LEGS AT ALL HORIZONTAL STEEL REINFORCING BARS.
2. LAP SPlice NO. 4 BARS BY 24", NO. 5 BARS BY 30" AND NO. 6 BARS BY 36".
3. PROVIDE 3/4" CHAMFERS AT ALL EXPOSED EDGES OF CONCRETE WALLS AND APRON.
4. ALL CONTROL AND CONSTRUCTION JOINTS SHOWN FOR WALLS ARE REQUIRED.
5. DO NOT SUBJECT WALLS OR SLABS TO SOIL PRESSURE, STREAM FLOW, OR OTHER LOADINGS UNTIL AFTER THE MINIMUM CURE TIMES HAVE BEEN MET AND UNTIL THE REQUIRED MINIMUM 28-DAY CONCRETE COMPRESSIVE STRENGTH HAS BEEN ACHIEVED

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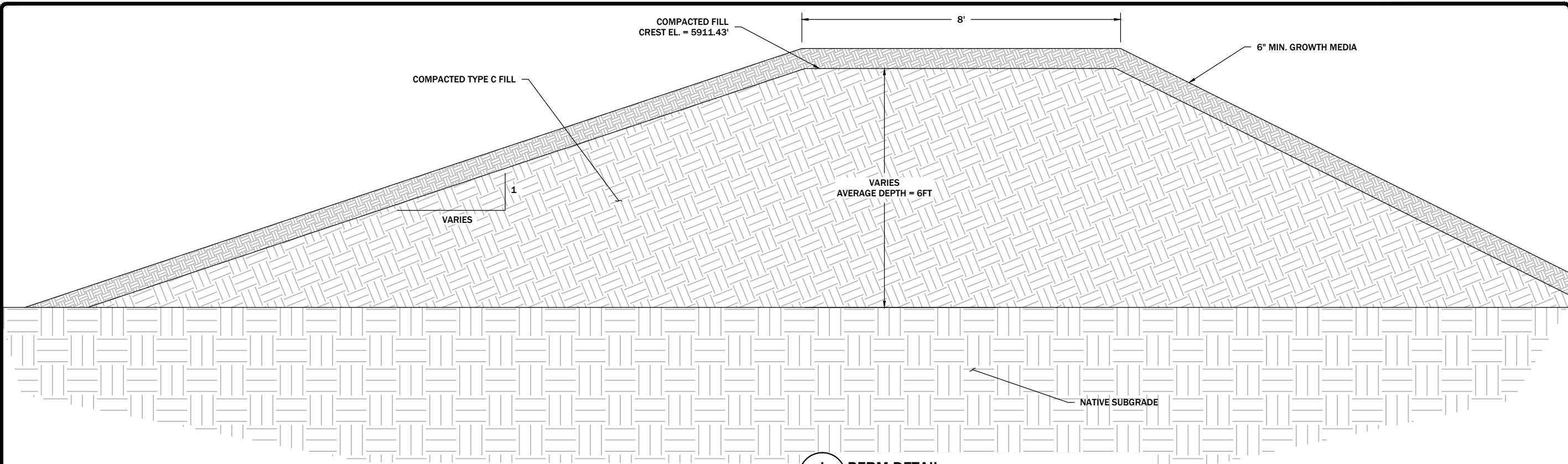
MTFWP  
FRENCH CREEK  
FISH BARRIER

FRENCH CREEK  
FISH BARRIER  
STRUCTURAL  
DETAILS

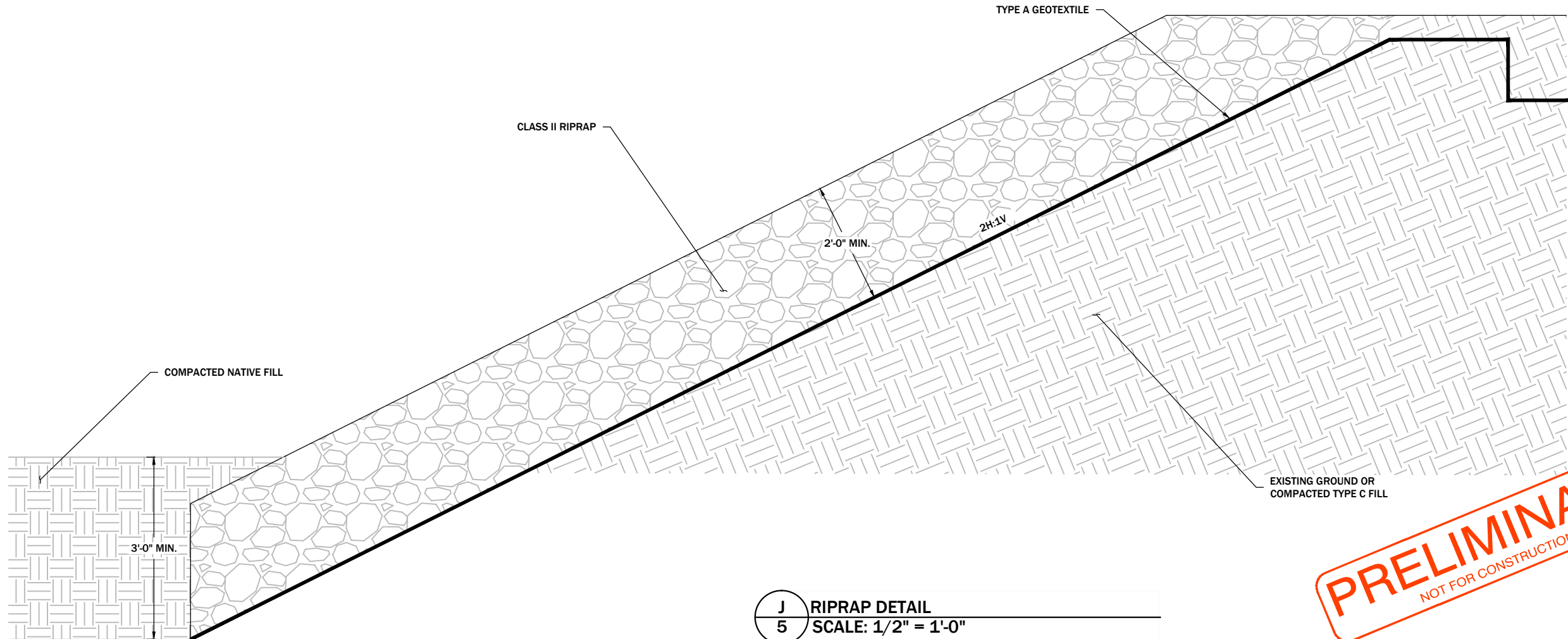
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SHEET  
6





**I**  
**5** BERM DETAIL  
SCALE: 3/8" = 1'-0"



**J**  
**5** RIPRAP DETAIL  
SCALE: 1/2" = 1'-0"

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SOURCE: PIONEER

SCALE IN FEET  
0 VARIES

MTFWP  
FRENCH CREEK  
FISH BARRIER

FRENCH CREEK  
FISH BARRIER  
BACKFILL  
DETAILS

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